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Final Report

D-89-CF-0644

District One Crop Diversification Trial

Funded by
The Agriculture Development Fund

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FINAL REPORT
District One ADF Demonstration Project #D-89-CF-0644

Crop Diversification Project

Co-operators: Wheeler Farms
Ron Galloway
October 1990

Abstract:

Various crops and varieties were compared for their potential as a crop in District #1. These crops and varieties included the standard crops such as wheat, barley, and oats as well as several oilseeds & pulse crops and canaryseed. Depending on the location, some of these new crops or varieties had either the same or a higher gross return/acre than the standard wheats.

Objective:

The objectives of this project were to:

1) Demonstrate some alternative crops

2) Evaluate the potential of these alternative crops within District #1.

Methodology:

Location - This project was situated at two sites. These were Willmar (SW 27-6-4-W2) and Estevan (NW 32-2-8-W2).

Soil Characteristics - The sites were situated on a Dark Brown loam soil. Both sites were on summerfallow fields. The Willmar area tends to be more of a parkland area with almost a thin black soil. Other soil characteristics include:

Seeding Practices - The plots were seeded in 5 x 15 M plots with a double disc press drill with 9" row spacings. There were four replicates for each treatment. The fertilizer was placed with the seed. A detailed description of the seeding method for each crop is as follows:

Crop	Seeding Rate	11-51-0 Rate
Wheat	59 lbs/ac	60 lbs/ac
Durum Wheat	71	60
Oats	58	60
Barley	58	60
Flax	25	40
Polish Canola	4	40

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Crop	Seeding Rate	11-51-0 Rate
Arg. Canola	5 lbs/ac	40 lbs/ac
Yellow Mustard	9	40
Brown Mustard	5	40
Peas	143	40
Laird Lentils	62	40
Eston Lentils	40	40
Canary Seed	30	40
Sunflowers	18,000 plants/ac	40
Sunwheat	40,000 plants/ac	40
Safflowers	22	40
Buckwheat	40	40
Soybeans	80	40

Weed Control - The following herbicides were used.

Hoegrass II - This was used on the cereals.
Poast - This was used on all the broadleaved crops.
Stampede CM - This was used on the canaryseed and oats.

Harvest - One yield sample was harvested from each plot with the following exceptions:

1) Several of the broadleaved crop plots were not harvested at both sites due to either poor weed control or flooding.

2) There were no plots of either safflower or soybean harvested due to either poor emergence and/or poor growth.

3) The sunflower plots at Estevan were not harvested due to bird damage during late summer.

4) Although the Estevan oat plots were harvested, yields were severely reduced due to some unknown factor. Herbicide damage was a strong possibility.

5) The lentils at the Willmar site had a great deal of vegetative growth. For lentils stress is needed to have the plants set more seed.

6) The buckwheat at the Willmar site also have very good growth with the stand over 3 feet high. Seed set may have been better with bees available to help pollinate the flowers and harvest done later in the fall.

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Results:

The average yields and return/acre for each cultivar at the two sites are as follows (current prices during late October):

Estevan site:

Variety/Crop	Yield	Price	Return
Westar Canola	15.6 bu	$5.34	$83.52
Parkland Canola	4.9 bu	5.34	26.17
Yellow Mustard	512 lbs	0.155	79.36
Brown Mustard	421 lbs	0.13	54.73
IS7111 Sunflowers	No Sample		
Jacques Capri	No Sample		
Sunwheat	No Sample		
Century Peas	13.7 bu	5.00	68.50
Laird Lentils	182 lbs	0.175	31.85
Eston Lentils	593 lbs	0.17	100.81
Norman Flax	14.6 bu	5.49	80.15
Vimy Flax	14.7 bu	5.49	80.70
Calibre Oats	22.0 bu	0.92	20.24
Dumont Oats	21.4 bu	0.92	19.69
Canaryseed	649 lbs	0.08	51.92
Heartland Barley	54.8 bu	1.47	80.56
Harrington Barley	53.6 bu	1.47	78.79
Katepwa Wheat	31.5 bu	3.00	94.50
Laura Wheat	32.5 bu	3.00	97.50
Kyle Durum	40.5 bu	3.00	121.50
Sceptre Durum	35.2 bu	3.00	105.60
Buckwheat	7.9 bu	3.75	29.63
Safflower	No Sample		
Soybean	No Sample		

Willmar site:

Variety/Crop	Yield	Price	Return
Westar Canola	11.5 bu	$5.34	$61.41
Parkland Canola	15.9 bu	5.34	84.91
Yellow Mustard	901 lbs	0.155	139.62
Brown Mustard	998 lbs	0.13	129.79
IS7111 Sunflowers	1008 lbs	0.10	105.84
Jacques Capri	1280 lbs	0.10	134.40
Sunwheat	1044 lbs	0.10	109.62
Century Peas	21.9 bu	5.00	109.50
Laird Lentils	619 lbs	0.175	108.33
Eston Lentils	853 lbs	0.17	145.01
Norman Flax	19.2 bu	5.49	105.41
Vimy Flax	21.1 bu	5.49	115.84
Calibre Oats	52.2 bu	0.92	48.02
Dumont Oats	50.6 bu	0.92	46.83
Canaryseed	906 lbs	0.08	72.48
Heartland Barley	53.0 bu	1.47	77.91
Harrington Barley	52.3 bu	1.47	76.88

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Variety/Crop	Yield	Price	Return
Katepwa Wheat	30.1 bu	3.00	90.30
Laura Wheat	27.0 bu	3.00	81.00
Kyle Durum	35.9 bu	3.00	107.70
Sceptre Durum	30.0 bu	3.00	90.00
Buckwheat	12.9 bu	3.75	48.38
Safflower	No Sample		
Soybean	No Sample		

Project Extension:

This project was located along a major highway in the district. Plot and treatment signs were placed at the site. The plot was mentioned in the extension agrologist newscolumn on January 10, May 16 and July 5, 1990. A newsletter describing all district ADF plots was sent to all rural boxholders in June. A notice of our ADF tour was sent to all boxholders in July and a tour held on July 20, 1990 with a stop at the Willmar site. ADF also produced a video of this tour. Project results will be summarized along with other projects and placed in a district newsletter to reach all farmers.

Final Comments:

Depending upon the site, some of the minor crops performed satisfactory as compared to the standard wheat cultivars. At the Estevan site, the Eston lentils had a return similar to the wheat cultivars. At the Willmar site, the sunflowers, mustards, peas, lentils, and flaxes had either a return higher or equal to that of the wheats. While some of these specialty crops did have a gross return higher than the traditional wheats, some of these specialty crops also tend to have special requirements such as increased costs for weed control, additional machinery attachments, and increased management. The prices used for special crops are open market prices in the fall of 1990 or available contract prices in the spring of 1990. These prices can vary significantly from year to year.

A project such as this should be repeated over several year in order to better evaluate how these specialty crops will perform in District #1 over a period of several years.

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Ron Galloway
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Uniroyal Chemical
Rohm & Haas

DISTRICT ONE CROP DIVERSIFICATION PROJECT

1990 District One ADF Demonstration #ADF-D-0644

Financial Report - December 1, 1990

	Approved ADF Budget	Project Expenditures
Technical Labour	$ 7,200.00	$ 7,200.00
Equipment Rental	4.001.96	4,001.96
Materials and Supplies	1,388.00	1,388.00
Promotion Costs (newsletter)	100.00	160.74
Administration (ADD Board)	590.00	590.00
Total:	$13,279.96	$13,340.70

As of December 1, 1990, 80% of the total budget allocation has been paid from ADF. Pending approval of the submitted final report the remaining 20% ($2,655.99) will be disbursed from ADF. Statements of Expenditures for promotional costs, administration as well as portions of the technical labour, equipment rental and materials have yet to be paid out.

A newsletter was produced including all the ADF projects in District One. This newsletter was mailed to district farmers. A copy is attached. Newsletter printing and mailing costs were higher than expected. These extra costs have been covered by the District One Agriculture Development and Diversification Board.